## 10712839 CLS.txt

# Most Frequently Occurring Classifications of Patents Returned From A Search of 10/712,839 on June 10, 2005

## **Combined Classifications**

- 6 250/208.1
- 5 257/E21.705
- 4 257/E27.134
- 4 428/202
- 4 428/914
- 3 250/216
- 3 257/434
- 3 257/680
- 3 257/686
- 3 257/778
- 3 257/784
- 3 257/787
- 3 257/E31.118
- 2 29/840
- 2 29/841
- 2 156/234
- 2 156/277
- 2 250/223R
- 2 250/226
- 2 250/548
- 2 257/432
- 2 257/433
- 2 257/666
- 2 257/678
- 2 257/704
- 2 257/723
- 2 257/737
- 2 257/777
- 2 257/E21.511
- 2 257/E23.033
- 2 257/E23.041 2 257/E23.052
- 2 257/E25.011 2 257/E25.013
- 2 257/E31.128
- 2 345/50
- 2 348/87
- 2 359/565
- 2 428/207
- 2 428/211.1
- 2 428/353
- 2 428/354
- 2 438/108
- 2 438/114
- 2 438/126
- 2 438/458
- 2 438/51

# PLUS Search Results for S/N 10712839, Searched June 10, 2005

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

4987477	6882021	5523608	4454179	5432333
5423119	5225373	5917242	4519234	5519205
5471553	5340420	5981117	4617469	5530278
5862248	5952725	5994166	4759968	5550763
5998862	6134014	6051878	5230458	5576833
6037655	6137570	6080264	5258873	5581632
6399418	4919994	6100108	5274242	5642158
6541284	4999076	6165815	5340978	5648655
6586824	5021676	6245594	5352900	5719440
6734419	5402663	4310978	5407729	5734155

Titles of Most Frequently Occurring Classifications of Patents Returned From A Search of 10/712,839 on June 10, 2005

6 250/208.1 (5 OR, 1 XR)

Class 250: RADIANT ENERGY

250/200 PHOTOCELLS; CIRCUITS AND APPARATUS

250/206 .Photocell controlled circuit

250/208.1 ...Plural photosensitive image detecting element

arrays

4 428/202 (1 OR, 3 XR)

Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES

428/98 STRUCTURALLY DEFINED WEB OR SHEET (E.G.,

**OVERALL DIMENSION, ETC.)** 

428/195.1 Discontinuous or differential coating,

impregnation or bond (e.g., artwork, printing, retouched

photograph, etc.)

428/201 ...Intermediate layer is discontinuous or

differential

428/202 ...With outer strippable or release layer

4 428/914 (0 OR, 4 XR)

Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES

428/914 TRANSFER OR DECALCOMANIA

3 250/216 (0 OR, 3 XR)

Class 250: RADIANT ENERGY

250/200 PHOTOCELLS; CIRCUITS AND APPARATUS

250/216 .Optical or pre-photocell system

3 257/434 (1 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/414 RESPONSIVE TO NON-ELECTRICAL SIGNAL (E.G.,

CHEMICAL, STRESS, LIGHT, OR MAGNETIC FIELD SENSORS)

257/428 Electromagnetic or particle radiation

257/431 ..Light

257/433 ...With housing or encapsulation

257/434 ....With window means

3 257/680 (2 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/678 HOUSING OR PACKAGE

257/680 .With window means

3 257/686 (1 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/678 HOUSING OR PACKAGE

257/685 .Multiple housings 257/686 ..Stacked arrangement

3 257/778 (0 OR, 3 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD

257/778 .Flip chip

3 257/784 (0 OR, 3 XR) Class 257: ACTIVE SOLID-STATE DEVICES 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD 257/784 .Wire contact, lead, or bond 3 257/787 (0 OR, 3 XR) Class 257: ACTIVE SOLID-STATE DEVICES 257/787 **ENCAPSULATED** 3 257/E31.118 (0 OR, 3 XR) Class 257: ACTIVE SOLID-STATE DEVICES 257/E31.046 .....Including microcrystalline Group IV compound (e.g., c-SiGe, c-SiC) (EPO) .Detail of nonsemiconductor component of 257/E31.11 radiation-sensitive semiconductor device (EPO) 257/E31.117 ..Encapsulation (EPO) 257/E31.118 ...For device having potential or surface barrier (EPO) 2 29/840 (0 OR, 2 XR) Class 029: METAL WORKING METHOD OF MECHANICAL MANUFACTURE 29/592 29/592.1 .Electrical device making 29/825 .. Conductor or circuit manufacturing 29/829 ...On flat or curved insulated base, e.g., printed circuit, etc. .... Assembling to base an electrical component, 29/832 e.g., capacitor, etc. 29/840 .....By metal fusion 2 29/841 (1 OR, 1 XR) Class 029: METAL WORKING 29/592 METHOD OF MECHANICAL MANUFACTURE 29/592.1 .Electrical device making 29/825 ..Conductor or circuit manufacturing 29/829 ...On flat or curved insulated base, e.g., printed circuit, etc. .... Assembling to base an electrical component, 29/832 e.g., capacitor, etc. 29/841 .....With encapsulating, e.g., potting, etc. 2 156/234 (0 OR, 2 XR) Class 156: ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE 156/1 METHODS 156/60 .Surface bonding and/or assembly therefor 156/230 ..Direct contact transfer of adhered lamina from carrier to base 156/234 ...Of portion only of lamina from carrier 2 156/277 (0 OR, 2 XR) Class 156: ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL **MANUFACTURE METHODS** 156/1

156/60 .Surface bonding and/or assembly therefor

156/277 .. With printing

(0 OR, 2 XR) 2 250/223R

Class 250: RADIANT ENERGY

250/200 PHOTOCELLS; CIRCUITS AND APPARATUS

250/216 .Optical or pre-photocell system

250/221 .. Controlled by article, person, or animal

...Inanimate article 250/222.1 250/223R ....Conveyor or chute

2 250/226 (0 OR, 2 XR)

Class 250: RADIANT ENERGY

PHOTOCELLS; CIRCUITS AND APPARATUS 250/200

250/216 .Optical or pre-photocell system ..Color (e.g., filter or spectroscope) 250/226

2 250/548 (2 OR, 0 XR)

Class 250: RADIANT ENERGY

PHOTOCELLS; CIRCUITS AND APPARATUS 250/200 250/201.1 .Photocell controls its own optical systems .. Controlling web, strand, strip, or sheet 250/548

2 257/432 (1 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

RESPONSIVE TO NON-ELECTRICAL SIGNAL (E.G., 257/414

CHEMICAL, STRESS, LIGHT, OR MAGNETIC FIELD SENSORS)

257/428 .Electromagnetic or particle radiation

..Light 257/431

...With optical element 257/432

2 257/433 (1 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

RESPONSIVE TO NON-ELECTRICAL SIGNAL (E.G., 257/414

CHEMICAL, STRESS, LIGHT, OR MAGNETIC FIELD SENSORS)

.Electromagnetic or particle radiation 257/428

257/431 ..Light

257/433 ...With housing or encapsulation

2 257/666 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/666 LEAD FRAME

2 257/678 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/678 HOUSING OR PACKAGE

2 257/704 (1 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

.With large area flexible electrodes in press 257/688

contact with opposite sides of active semiconductor chip

and surrounded by an insulating element, e.g., ring

257/701 .Insulating material

257/704 .. Cap or lid

2 257/723 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/688 .With large area flexible electrodes in press

contact with opposite sides of active semiconductor chip and surrounded by an insulating element, e.g., ring

257/723 .For plural devices

2 257/737 (1 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD

257/737 .Bump leads

2 257/777 (1 OR, 1 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD

257/777 .Chip mounted on chip

2 257/E21.511 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES OR OF PARTS THEREOF (EPO)

257/E21.002 .Manufacture or treatment of semiconductor device (EPO)

257/E21.04 ...Device having at least one potential-jump barrier or surface barrier, e.g., PN junction, depletion layer, carrier concentration layer (EPO)

257/E21.499 ...Assembling semiconductor devices, e.g., packaging, including mounting, encapsulating, or treatment of packaged semiconductor (EPO)

257/E21.506 ....Attaching or detaching leads or other conductive members, to be used for carrying current to or from device in operation (EPO)

257/E21.509 .....Involving soldering or alloying process, e.g., soldering wires (EPO)

257/E21.511 ......Mounting on insulating member provided with metallic leads, e.g., flip-chip mounting, conductive die mounting (EPO)

2 257/E23.033 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)

257/E23.023 ...Consisting of soldered or bonded constructions (EPO)

257/E23.031 ...Lead frames or other flat leads (EPO)

257/E23.032 ....Additional leads (EPO)

257/E23.033 .....Additional leads being bump or wire (EPO)

2 257/E23.041 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)

257/E23.023 ...Consisting of soldered or bonded constructions (EPO)

257/E23.031 ...Lead frames or other flat leads (EPO)

257/E23.041 ....Multilayer (EPO)

### 2 257/E23.052 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)

257/E23.023 ...Consisting of soldered or bonded constructions (EPO)

257/E23.031 ...Lead frames or other flat leads (EPO)

257/E23.052 ....Assembly of semiconductor devices on lead frame (EPO)

# 2 257/E25.011 (0 OR, 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E25.001 ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E25.002 .All devices being of same type, e.g., assemblies of rectifier diodes (EPO) 257/E25.003 ...Devices not having separate containers (EPO)

257/E25.01 ...Device consisting of plurality of

semiconductor or other solid state devices or components formed in or on common substrate, e.g., integrated circuit device (EPO)

257/E25.011 ....Devices being arranged next and on each other, i.e., mixed assemblies (EPO)

#### 2 257/E25.013 (0 OR. 2 XR)

Class 257: ACTIVE SOLID-STATE DEVICES

257/E25.001 ASSEMBLIES CONSISTING OF PLURALITY OF INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)

257/E25.002 All devices being of same type, e.g., assemblies of rectifier diodes (EPO)

257/E25.003 .. Devices not having separate containers (EPO)

257/E25.01 ... Device consisting of plurality of

semiconductor or other solid state devices or components formed in or on common substrate, e.g., integrated circuit device (EPO)

257/E25.013 ....Stacked arrangements of devices (EPO)

2 257/E31.128 (0 OR, 2 XR)

#### 10712839\_CLSTITLES.txt Class 257: ACTIVE SOLID-STATE DEVICES 257/E31.046 .....Including microcrystalline Group IV compound (e.g., c-SiGe, c-SiC) (EPO) .Detail of nonsemiconductor component of 257/E31.11 radiation-sensitive semiconductor device (EPO) 257/E31.127 ... Optical element associated with device (EPO) 257/E31.128 ... Device having potential or surface barrier (EPO) 2 345/50 (0 OR, 2 XR) Class 345: COMPUTER GRAPHICS PROCESSING, OPERATOR INTERFACE PROCESSING, AND SELECTIVE VISUAL DISPLAY **SYSTEMS** 345/30 PLURAL PHYSICAL DISPLAY ELEMENT CONTROL SYSTEM (E.G., NON-CRT) 345/33 .Segmented display elements ..Light-controlling display elements 345/48 ...Liquid crystal elements 345/50 2 348/87 (1 OR, 1 XR) Class 348: TELEVISION 348/61 SPECIAL APPLICATIONS 348/86 .Manufacturing 348/87 .. Electronic circuit chip or board (e.g., positioning) (0 OR, 2 XR) 2 359/565 Class 359: OPTICS: SYSTEMS 359/558 **DIFFRACTION** 359/565 .From zone plate 2 428/207 (0 OR, 2 XR) Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES 428/98 STRUCTURALLY DEFINED WEB OR SHEET (E.G., **OVERALL DIMENSION, ETC.)** 428/195.1 .Discontinuous or differential coating. impregnation or bond (e.g., artwork, printing, retouched photograph, etc.) 428/206 ..Including particulate material 428/207 ...Including coloring matter 2 428/211.1 (0 OR, 2 XR) Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES STRUCTURALLY DEFINED WEB OR SHEET (E.G., 428/98 OVERALL DIMENSION, ETC.) 428/195.1 .Discontinuous or differential coating,

2 428/353 (0 OR, 2 XR)

428/211.1

photograph, etc.)

..Including paper layer

Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES
428/221 WEB OR SHEET CONTAINING STRUCTURALLY DEFINED
ELEMENT OR COMPONENT

impregnation or bond (e.g., artwork, printing, retouched

428/343 .Adhesive outermost layer 428/353 ...Including a primer layer

2 428/354 (0 OR, 2 XR)

Class 428: STOCK MATERIAL OR MISCELLANEOUS ARTICLES

428/221 WEB OR SHEET CONTAINING STRUCTURALLY DEFINED

**ELEMENT OR COMPONENT** 

428/343 .Adhesive outermost layer 428/354 ..Three or more layers

2 438/108 (2 OR, 0 XR)

Class 438: SEMICONDUCTOR DEVICE MANUFACTURING; PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING, ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR

438/107 .Assembly of plural semiconductive substrates

each possessing electrical device

438/108 ...Flip-chip-type assembly

2 438/114 (0 OR, 2 XR)

Class 438: SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING, ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR

438/110 .Making plural separate devices

438/113 ...Substrate dicing

438/114 ...Utilizing a coating to perfect the dicing

2 438/126 (0 OR, 2 XR)

Class 438: SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING, ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR

438/125 Insulative housing or support

438/126 ...And encapsulating

2 438/458 (0 OR, 2 XR)

Class 438: SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/455 BONDING OF PLURAL SEMICONDUCTOR SUBSTRATES

438/458 .Subsequent separation into plural bodies

(e.g., delaminating, dicing, etc.)

2 438/51 (2 OR, 0 XR)

Class 438: SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/48 MAKING DEVICE OR CIRCUIT RESPONSIVE TO

NONELECTRICAL SIGNAL

438/50 .Physical stress responsive

438/51 ...Packaging (e.g., with mounting,

encapsulating, etc.) or treatment of packaged

semiconductor